

REMARKS

Applicants respectfully request reconsideration of the above-identified application in view of the foregoing amendments and following remarks.

Status of Claims

Claims 15-16 have been cancelled, and claim 30 was cancelled previously. Claims 1-14 and 17-29 have been amended. Claims 31-33 have been added. Consequently, claims 1-14, 16-29, and 31-33 are pending in the application. Applicants respectfully assert that the amendments to the claims and the new claims add no new matter.

Drawings

In the Office Action, the Examiner objected to the drawings under 37 CFR 1.83(a). Applicants have added new FIG. 17 to show the “plurality of dielectric pellets” as recited in claim 20 and have added new FIG. 18 to show the “at least one groundplane is sandwiched between the upper and lower surfaces of the dielectric” as recited in claim 24. No new matter has been entered.

Claim Objections

In the Office Action, the Examiner objected to claims 1 and 2 requesting that “the ground plane” be changed to “the at least one ground plane.” Applicants respectfully submit that in view of the present amendment to claim 1 complying with the Examiner’s request, the objection to this claim has been overcome. Claim 2 does not contain the “the ground plane”; however, claims 4, 21-22, and 25-27 have also been amended in accordance with the Examiner’s request.

The Examiner also objected to claim 2-29 requesting that “an antenna structure” be changed to “the antenna structure” and claim 9 requesting that “surface” be changed to “said surface of the dielectric pellet.” Applicants respectfully submit that in view of the present amendments to claim 2-29 complying with the Examiner’s requests, these objections have been overcome.

The Examiner also objected to claim 28, requesting that “less than that” be changed to “less than to dielectric constant.” Claim 28 has been amended, and thus the Examiner’s objection to this claim has been overcome.

35 U.S.C. § 112 Rejections

The Examiner rejected claims 15-16, 20, and 28-29 under 35 USC § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 15-16 have been cancelled, rendering moot the Examiner’s rejection of those claims.

With respect to claim 20, Applicants respectfully submit paragraph 0033 of the specification provides sufficient basis for the “antenna structure as claimed in claim 1 comprising a plurality of dielectric pellets.” Specifically, the last paragraph on page 7 of the Specification states “the antenna structure may include more than one elevated dielectric pellet.” Applicants have also added FIG. 17 and the accompanying amendment to the specification on page 14. Therefore, Applicants respectfully request that the rejection of claim 20 under 35 U.S.C. § 112 be withdrawn.

With respect to claims 28 and 29, the Examiner asserts that “it is not clear that the dielectric constant of the solid dielectric filler is more than or less than the dielectric constant of the dielectric pellet” and requests clarification. Applicants respectfully submit that the present amendments to claim 28 and 29 overcome the Examiner’s rejection. Therefore, Applicants respectfully request that the rejection of claims 28 and 29 under 35 U.S.C. § 112 be withdrawn.

35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 1-16 and 20-29 under 35 U.S.C. § 103(a), as being unpatentable over Morrow et al., U.S. Patent No. 7,102,573, in view of Ohtsuka et al., U.S. Patent No. 5,801,660. Applicants respectfully submit that the rejection of claims 1-16 and 20-29 under 35 U.S.C. § 103(a), as being unpatentable over Morrow in view of Ohtsuka should be withdrawn.

With respect to claim 1 the Examiner asserts on page 6 of the Office Action that Morrow discloses “a dielectric pellet (212).” Applicants respectfully disagree.

As stated on page 5, lines 4-6 of Applicants’ specification, “the expression dielectric pellet is intended to denote an element of dielectric material, preferably a dielectric ceramic material or other low-loss dielectric material, of appropriate shape.” Morrow’s item 212 is a “feed plate” (see Morrow, column 3, lines 59-60), of which two are shown in Figures 2 and 4, e.g. a pair of feed plates. Morrow’s feed plate 212 “is shaped into a ‘V’ shape and the two top edges of the ‘V’ are soldered to the bottom surface 308 of the patch plate 204” (Morrow, column 5, lines 1-3). A feed plate is very different from a dielectric pellet, and this “V” shape is not appropriate for a dielectric pellet as shown for example in Applicants’ FIGS. 1-3. Morrow also fails to disclose that his feed plate is made of a dielectric material. Morrow does say that his feed plate 212 “can be an extension of feed line 210” (Morrow, column 5, lines 12-13) which indicates that Morrow’s feed plate 212 is a conductive, rather than dielectric, material.

The addition of Ohtsuka fails to cure the deficiencies of Morrow. In particular, Ohtsuka fails to disclose a dielectric pellet. Therefore, neither of Morrow or Ohtsuka alone or in combination render claim 1 obvious.

Claims 15 and 16 have been cancelled, rendering their rejection as moot. Each of claims 2-14 and 20-29 depends from independent claim 1 and includes all the features of claim 1 as well as additional distinguishing features, and is therefore patentable.

Accordingly, the rejection of claims 1-16 and 20-29 under 35 U.S.C. § 103(a), as being unpatentable over Morrow in view of Ohtsuka is respectfully requested to be withdrawn.

The Examiner rejected claims 17-19 under 35 U.S.C. § 103(a), as being unpatentable over Morrow in view of Ohtsuka, and further in view of Mikkola et al., U.S. Application No. 2003/0146878. Applicants respectfully submit that the rejection of claims 17-19 under 35 U.S.C. § 103(a), as being unpatentable over Morrow in view of Ohtsuka and further in view of Mikkola should be withdrawn.

Each of claims 17-19 depends from claim 1 and includes all of the features of claim 1 as well as additional distinguishing features. As discussed above, claim 1 is allowable over Morrow and Ohtsuka. The addition of Mikkola fails to cure the deficiencies of Morrow and Ohtsuka. In particular, Mikkola fails to disclose a dielectric pellet. Therefore, none of Morrow, Ohtsuka, and Mikkola, alone or in combination render claim 1 and dependent claims 17-19 obvious.

Accordingly, the rejection of claims 17-19 under 35 U.S.C. § 103(a), as being unpatentable over Morrow in view of Ohtsuka and further in view of Mikkola is respectfully requested to be withdrawn.

New Claims

Each of new claims 31 and 32 depends from independent claim 1, which as discussed above is allowable over the prior art rejections of record. Therefore, claims 31 and 32 are likewise allowable.

New independent claim 33 includes “a dielectric [] pellet”, and is allowable over the prior art rejections of record.

Conclusion

In view of the foregoing amendment and remarks, and for at least the reasons discussed above, Applicants respectfully submit that the claims are allowable. Their favorable reconsideration and allowance are respectfully requested.

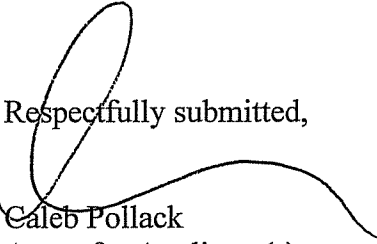
Should the Examiner have any questions or comments as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Applicants: IELLICI, Devis et al.
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The Office is authorized to charge the \$25 for the small entity fee for the one (1) new claim over 20 to deposit account No. 50-3355. No other fees are believed to be due associated with this paper; however, if any fees are due, please charge such fees to deposit account No. 50-3355.

Respectfully submitted,



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